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What is claimed is:

i	1. An optical communication system comprising an external cavity laser tha		
2	comprises:		
3	a gain medium comprising an active region, a beam expanding region,		
4	and an antireflective layer on a first surface of the gain medium;		
5	an optical waveguide located adjacent the gain medium such that at		
6	least a portion of the electromagnetic energy generated by the active region		
7	passes through the beam expanding region and through the antireflective		
8	layer into the optical waveguide; and		
9	a Bragg grating integral with or coupled to the optical waveguide,		
10	wherein the medium and the optical waveguide exhibit a coupling		
11	efficiency of at least 40% with or without the presence of coupling optics located		
12	between the gain medium and the optical waveguide, and		
13	wherein the laser is configured and operated to provide a multimode output of at		
14	least two modes.		
i	2. The system of claim 1, wherein the coupling efficiency is at least 40%		
2	with or without the presence of coupling optics located between the gain medium and the		
3	optical waveguide.		
1	3. The system of claim 1, wherein the gain medium comprises a cavity less		
2	than 1 cm in length.		
l	4. The system of claim 1, wherein the length of the system is less than 100		
2	km.		
l	5. The system of claim 1, wherein the laser is operated by direct modulation		
1	6. The system of claim 1, wherein the bit error rate of the system is less than		
2	10 ⁻⁹ .		

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	1 7.	The system of claim 6, wherein the bit error rate of the system is less than		
	2 10 ⁻¹² .	the off effor rate of the system is less than		
	1 8.	The system of claim 1, wherein the laser is operated at 2.5 GHz or greater.		
i	l 9.	The system of claim 1, wherein the laser is operated in the absence of a		
2	-compensating apparatus.			
1	10.	The system of claim 1, wherein the gain medium and optical waveguide		
2	are coupled	in the absence of coupling optics.		
1				
2	11.	An optical communication system comprising an external cavity laser that		
3	comprises:			
4	a gain flection comprising an active region, a beam expanding main			
	and an antheriective layer on a first surface of the gain medium:			
5	an opt	ical waveguide located adjacent the gain medium such that at		
	reast a portion of the electromagnetic energy generated by the active region			
	passes through the beam expanding region and through the antireflective			
8	layer into the	optical waveguide; and		
9	a Brag	g grating integral with or coupled to the optical waveguide,		
10	wnere	n the medium and the optical waveguide exhibit a coupling		
11	efficiency of a	least 40% in the absence of coupling optics located		
12	between the gain medium and the optical waveguide,			
13	whereir	the laser is configured and operated to provide a multimode output of at		
14	least two mode	s,		
15	wherein	the laser is operated by direct modulation,		
16	wherein	the laser is operated in the absence of a temperature-compensating		
17	apparatus,			
8	wherein	the gain medium comprises a cavity less than 1 cm in length, and		
9	wherein	the length of the system is less than 100 km.		
		o soom is less than 100 km.		

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- 1 12. The system of claim 11, wherein the coupling efficiency is at least 40% with or without the presence of coupling optics located between the gain medium and the optical waveguide.
- 1 13. The system of claim 11, wherein the bit error rate of the system is less than 10^{-9} .
- 1 14. The system of claim 13, wherein the bit error rate of the system is less than 10^{-12} .
- 1 15. The system of claim 13, wherein the laser is operated at 2.5 GHz or greater